

What is claimed is:

1. A tactile feedback apparatus comprising
an interfacing element acted on by a user; and
a piezo actuator arranged on said interfacing element for presenting tactile feedback to a user acting on said interfacing element;
said piezo actuator being of a circular-shaped multi-layered structure and having a shape changed to an upturned dome shape or to a downturned dome shape on application of voltages of opposite polarities to a plurality of layers in an upper portion of said multi-layered structure and to a plurality of layers in a lower portion of said multi-layered structure.
2. The tactile feedback apparatus as defined in claim 1 wherein at least one of the amplitude and the frequency in a change between said upturned dome shape and the downturned dome shape is determined depending on an inputting operation by a user mediated by said interfacing element.
3. The tactile feedback apparatus as defined in claim 1 further comprising
a force sensor for detecting the force applied at the time of the operation for inputting by a user; wherein
at least one of the amplitude and the frequency in a change between said upturned dome shape and the downturned dome shape is determined depending on the force as detected by said force sensor.
4. The tactile feedback apparatus as defined in claim 1 wherein

said interfacing element is a joystick operating device, a button device or a switch device.

5. A system comprising a main body part executing an application program and a user interface program and a control device mounted in separation from said main body part and adapted for controlling the state of said application program;

said control device including an interfacing element acted on by a user and a piezo actuator arranged on said interfacing element for presenting tactile feedback to a user acting on said interfacing element;

said piezo actuator having a circular-shaped multi-layered structure and having a shape changed to an upturned dome shape or to a downturned dome shape on application of voltages of opposite polarities to a plurality of layers in an upper portion of said multi-layered structure and to a plurality of layers in a lower portion of said multi-layered structure.